

WHAT IS CLAIMED IS:

1. A chip scale package (CSP) structure for an image sensor,
comprising:

a semi-conductor image sense chip;

5 multiple bonding pads formed on a top face of the
semi-conductor image sense chip;

a conducting wire extending from each of the multiple
bonding pads by wire-bonding;

liquefied jelly-like material covered with the top face of the
10 semi-conductor image sense chip and forming a transparent layer on
the top face of the semi-conductor image sense chip after drying up, the
transparent layer having a thickness being equal to a height of each of
the conduct wire relative to the top face of the semi-conductor image
sense chip.

15 2. The CSP structure as claimed in claim 1, wherein the
transparent layer comprises a top face ground and burnished to form a
plane that is parallel to the top face of the semi-conductor image sense
chip and a periphery covered by a shelter to prevent the light from
laterally penetrating into the chip scale package structure and
20 influencing the quality of the images that is collected by the chip scale
package structure.

3. The CSP structure as claimed in claim 2, wherein a metal
solder ball is planted on a free end of each of the conduct wires and

electrically connected to a flexible printed circuit (FPC), the FPC having a window defined therein and corresponding to a sensing area of the semi-conductor image sense chip and a conducting circuit formed on a bottom face of the FPC, the conducting circuit including
5 multiple first solder points formed near a periphery of the window and the number of the first solder points corresponding to that of the conduct wire, the conducting circuit having multiple second solder points formed near one side of the FPC.

4. The CSP structure as claimed in claim 3, wherein the second
10 solder points of the conducting circuit are arranged in an array.

5. A chip scale package (CSP) structure for an image sensor, comprising a semi-conductor image sense chip having multiple bumps formed on a top face of the semi-conductor image sense chip and a transparent layer attached to the top face of the semi-conductor image
15 sense chip, the transparent layer having a thickness being equal to that of each of the bumps.

6. The CSP structure as claimed in claim 5, wherein the transparent layer is a transparent glass plate that includes multiple penetration holes defined therein, each penetration hole aligning with a
20 corresponding one of the multiple bumps such that each bump extends to a top face of the transparent glass plate.

7. The CSP structure as claimed in claim 6, wherein the transparent layer is a transparent glass plate and has an area being

equal to that of the semi-conductor image sense chip, the transparent glass plate having an periphery covered by a shelter to prevent the light from laterally penetrating into the chip scale package structure and influencing the quality of the images that is collected by the chip scale package structure, a metal solder ball planted on a free end of each of the multiple bumps and electrically connected to a flexible printed circuit (FPC), the FPC having a window defined therein and corresponding to a sensing area of the semi-conductor image sense chip and a conducting circuit, the conducting circuit including multiple first solder points formed near a periphery of the window, the number of the first solder points corresponds to that of the bumps, the conducting circuit including multiple second solder points formed near one side of the FPC.

8. The CSP structure as claimed in claim 5, wherein liquefied jelly-like material cover with the top face of the semi-conductor image sense chip and forming a transparent layer on the top face of the semi-conductor image sense chip after drying up.

9. The CSP structure as claimed in claim 8, wherein the transparent layer comprises a top face ground and burnished to form a plane that is parallel to the top face of the semi-conductor image sense chip and a periphery covered by a shelter to prevent the light from laterally penetrating into the chip scale package structure and influencing the quality of the images that is collected by the chip scale

package structure.

10. The CSP structure as claimed in claim 9, wherein the a metal solder ball planted on a free end of each of the multiple bumps and electrically connected to a flexible printed circuit (FPC), the FPC
- 5 having a window defined therein and corresponding to a sensing area of the semi-conductor image sense chip and a conducting circuit, the conducting circuit including multiple first solder points formed near a periphery of the window, the number of the first solder points corresponds to that of the bumps, the conducting circuit including
- 10 multiple second solder points formed near one side of the FPC.